

NCERT SOLUTIONS- NUTRITION IN PLANTS

NCERT Solutions for Class 7 Science Chapter 1 Nutrition In Plants is the essential study material to perfect Nutrition In Plants topics. The NCERT Class 7 Science solutions provided here correctly answer NCERT textbook questions. Solutions curated in a comprehensive manner will help students understand the subtopics in this chapter in a better way.

IMPORTANT SUB-TOPICS MENTIONED IN THE NCERT CLASS 7 SCIENCE CHAPTER 1 NUTRITION IN PLANTS:

NCERT Solutions for Class 7 Science Chapter 1 Nutrition In Plants has the following sub-topics as given below:

Sr. no	Topics
1.	Mode of Nutrition in Plants
2.	Photosynthesis – the food-making process in Plants
3.	The alternative mode of nutrition in Plants
4.	Saprophytes
5.	Nutrient replenishment in the soil

NCERT SOLUTIONS CLASS 7 SCIENCE CHAPTER 1 NUTRITION IN PLANTS:**1. Why do organisms take food?**

ANS- Energy is a necessity for all living things. Abiotic components like soil, air, water, and sunlight help plants prepare their food to get nutrients. In contrast, animals must consume food in order to gain nutrients from either plants or other animals; as a result, animals must consume food in order to obtain both nutrition and energy.

2. Distinguish between a parasite and a saprophyte.

ANS-

Saprophytes	Parasite
Obtaining nutrients from dead and decaying matter.	Parasites eat at their host's expense and live on or in their host.
Example: Fungi	Example: Roundworm

3. How would you test the presence of starch in leaves?

ANS- Take two identical potted plants. 72 hours should pass with one in the dark and the other in the light. Use the two plants' leaves to conduct the iodine test in the manner described below. After 3–4 days, repeat the iodine test once more on the leaves of the pot that was previously kept in the dark.

Iodine test: Put iodine solution on the leaf.

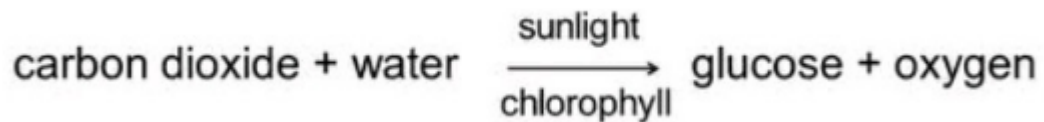
Observation:

- The leaves of a plant kept in sunlight will develop a blue-black colour, which denotes the presence of starch.
- The leaves of plants stored in the darkroom won't exhibit a blue-black colour. This displays the lack of starch.

4. Give a brief description of the process of synthesis of food in green plants.

ANS- To make their food, green plants undergo a process called photosynthesis. The steps are as follows.

- The plant's leaves receive water that has been delivered from the plant's roots.
- Through stomata, carbon dioxide from the air enters the leaves. This diffuses in the chlorophyll-containing cell.
- With the help of sunlight, water molecules are broken down into Hydrogen and Oxygen.
- Carbohydrates are created when carbon dioxide reacts with oxygen and hydrogen.



5. Show with the help of a sketch that plants are the ultimate source of food.

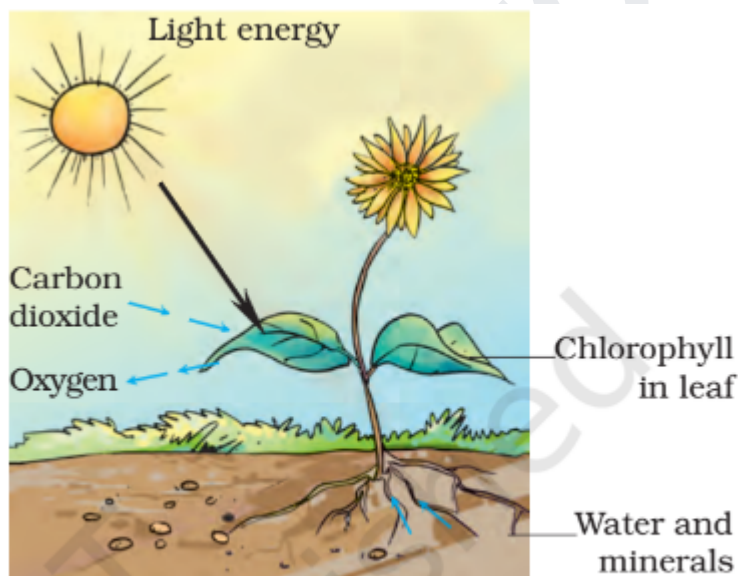


Fig. 1.3 Diagram showing photosynthesis

ANS-

6. Fill in the blanks.

- (a) Green plants are called _____ since they synthesise their own food.
- (b) The food synthesised by plants is stored as _____.
- (c) In photosynthesis, solar energy is absorbed by the pigment called _____.

(d) During photosynthesis, plants take in _____ and release _____ gas.

ANS-

- a. Autotrophs
- b. Starch
- c. Chlorophyll
- d. Carbon dioxide and oxygen

7. Name the following.

- i) A parasitic plant with a yellow, slender and branched stem.
- ii) A plant that is partially autotrophic.
- iii) The pores through which leaves exchange gases.

ANS-

- i) Cuscuta
- ii) Pitcher plant
- iii) Stomata

8. Tick the correct answer.

a. Cuscuta is an example of:

- (i) Autotroph
- (ii) parasite
- (iii) saprotroph
- (iv) host

b. The plant which traps and feeds on insects is:

- (i) Cuscuta
- (ii) China rose
- (iii) pitcher plant
- (iv) rose

ANS-

- a. (ii) Parasite
- b. (iii) Pitcher Plant

9. Match the items given in Column I with those in Column II.

Column-I	Column-II
Chlorophyll	Rhizobium
Nitrogen	Heterotrophs
Cuscuta	Pitcher plant
Animals	Leaf
Insects	Parasite

ANS-

Column-I	Column-II
Chlorophyll	Leaf
Nitrogen	Rhizobium
Cuscuta	Parasite
Animals	Heterotrophs
Insects	Pitcher plant

10. Mark 'T' if the statement is true and 'F' if it is false.

- (i) Carbon dioxide is released during photosynthesis. (T/F)
- (ii) Plants which synthesise their food are called saprotrophs. (T/F)
- (iii) The product of photosynthesis is not a protein. (T/F)
- (iv) Solar energy is converted into chemical energy during photosynthesis. (T/F)

ANS-

1. False
2. False
3. True
4. True

11. Choose the correct option from the following:

Which part of the plant takes in carbon dioxide from the air for photosynthesis?

- (i) Root hair (ii) Stomata (iii) Leaf veins (iv) Petals

ANS- (ii) Stomata

12. Choose the correct option from the following:

Plants take carbon dioxide from the atmosphere mainly through their:

- (i) roots (ii) stem (iii) flowers (iv) leaves

ANS- (iv) Leaves

13. Why do farmers grow many fruits and vegetable crops inside large greenhouses? What are the advantages to the farmers?

ANS- Large greenhouses are used to cultivate fruit and vegetable crops because they give enough temperature and weather protection from the outside elements.

Farmers can benefit from growing fruits and vegetables in greenhouses by

- Crops are shielded from illnesses and bad weather by it.
- It shields crops from the wind and pests.